

GREATER
PHILADELPHIA

FUTURE
FORCES

**Enduring
Urbanism**

**Transportation
on Demand**

**The Free
Agent
Economy**

**Severe
Climate**

**U.S. Energy
Boom**

The Futures Group
September 22, 2015

Agenda

- Modeling
- Public Survey
- Key Takeaways
- Universal Actions
- What-if Scenarios and Contingent Actions
- Next Steps

Impacts 2050

Age-pyramids

- Birth rates
- Death rates
- Migration rates
- Marriage rates
- Divorce rates

Development patterns

Sketch-level travel demand model

- VMT & vehicle trips
- Passenger trips
- Transit ridership
- Walking & biking trips

NCHRP

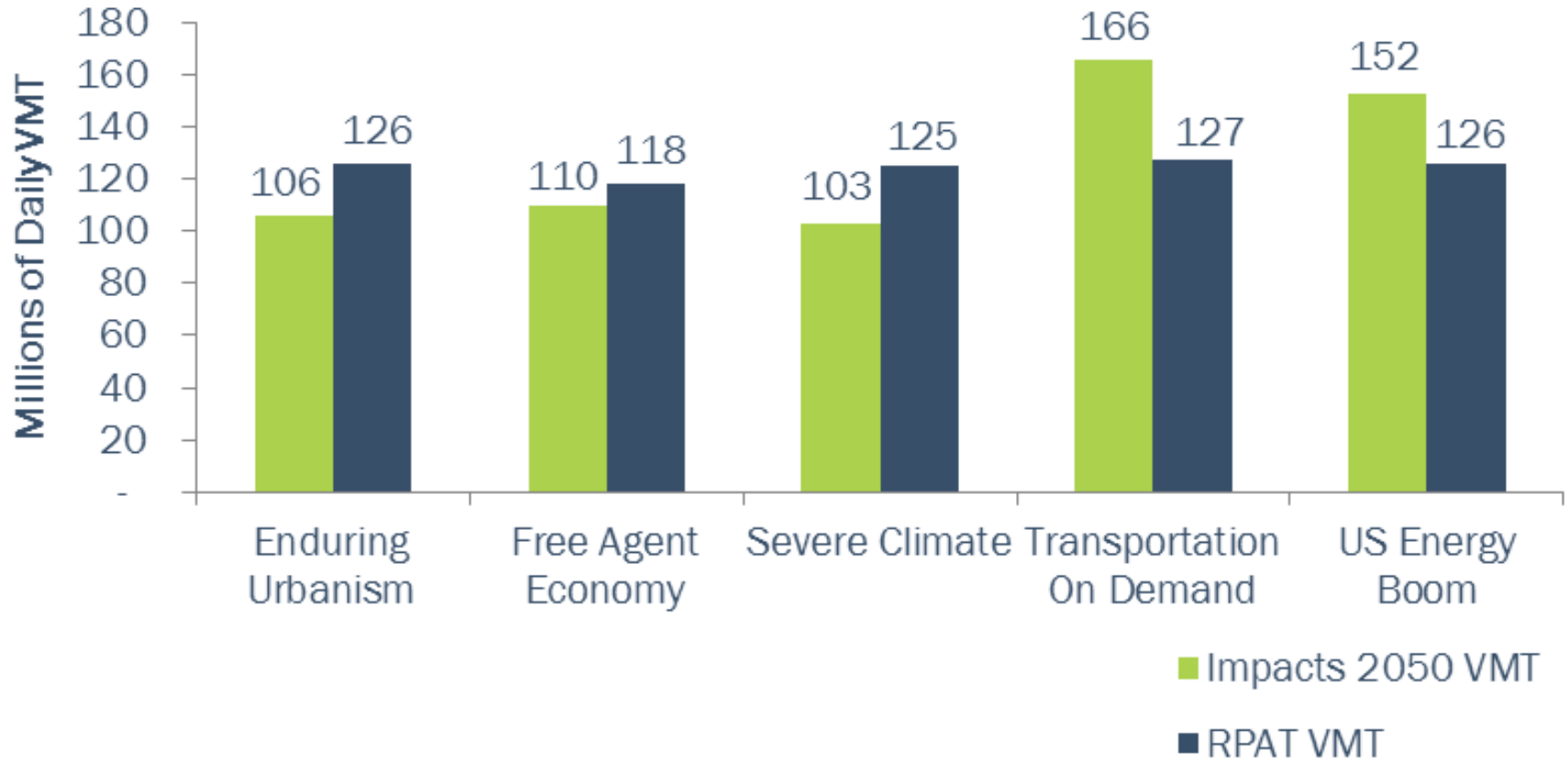
NATIONAL
COOPERATIVE
HIGHWAY
RESEARCH
PROGRAM

PROJECT 20-83

IMPACTS 2050:

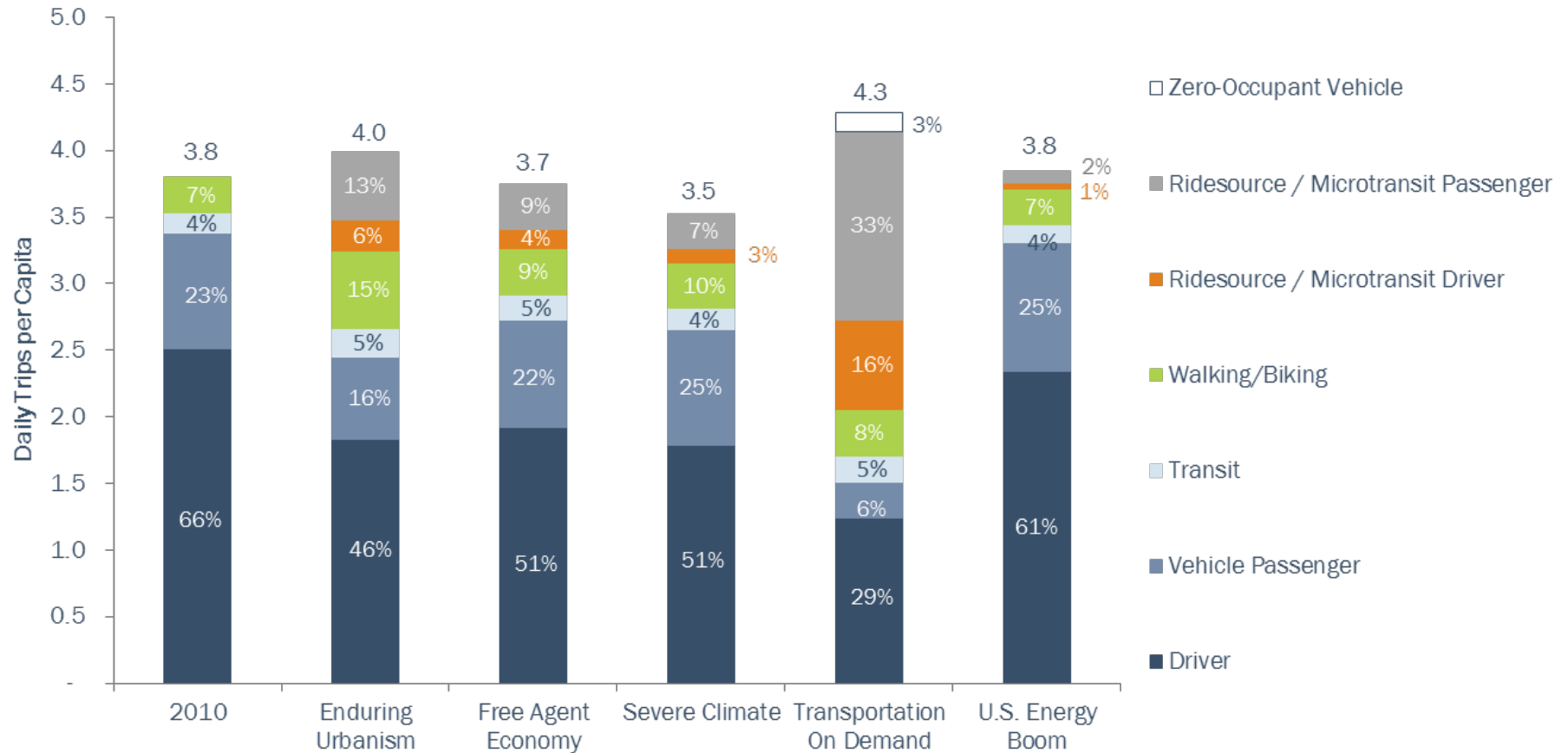
Dynamic Analysis of Socio-Demographic & Travel Scenarios

VMT Comparison



Source: DVRPC, 2015

Daily Trip Modeshare

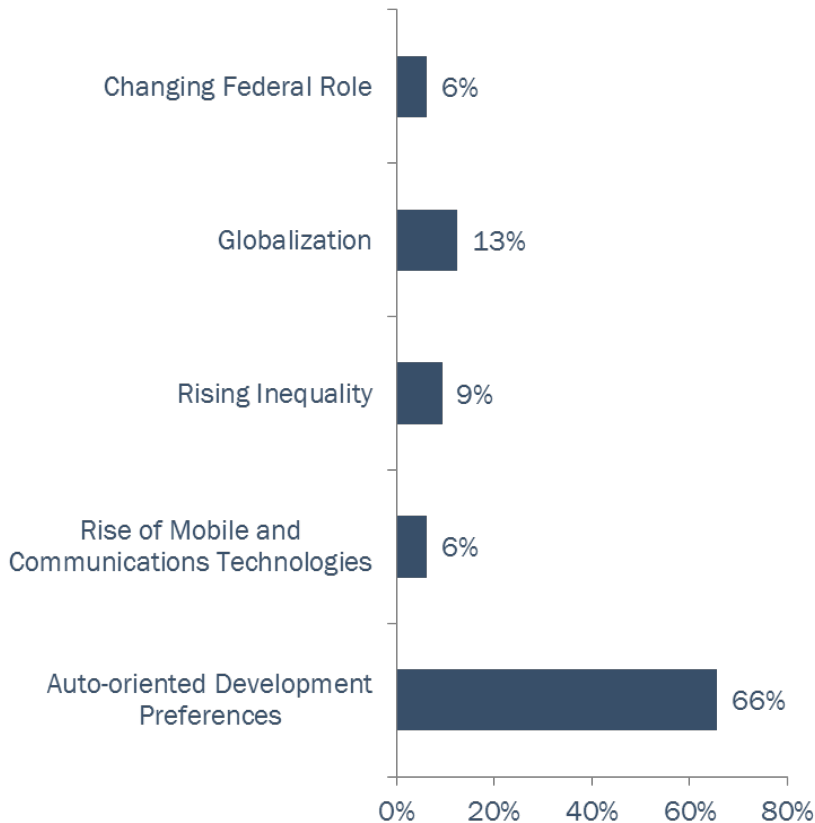


Source: DVRPC, 2015

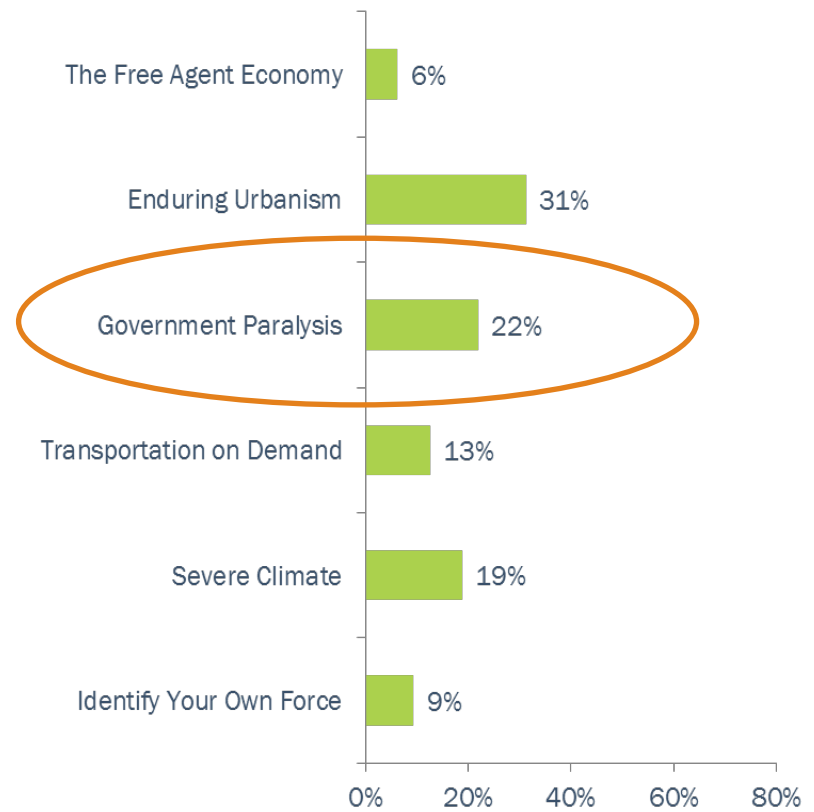
Public Survey

What do you think is the most significant force behind the transportation, development patterns, and economic growth in Greater Philadelphia ...

Over the last 50 years:



Over the next 50 years:



www.dvrpc.org/50/survey

3 Key Takeaways

- ❑ **The future is increasingly uncertain**
- ❑ **Future Forces will bring new challenges and opportunities**
 - ❑ **Partisan Paralysis - respond internally with readily available tools**
- ❑ **There is much the region can do prepare for these forces**
 - ❑ **Universal Actions**
 - ❑ **Contingent Actions**

Universal Actions

- Mixed-use, infill development**
- Build lifelong communities**
- Immigrant-friendly policies**
- Vision Zero**
- Green infrastructure and stream buffer ordinances**
- Structured freight plan**
- Telecommunications infrastructure**



Source: Nevue Ngan and Associates



Source: Flickr user Bozzuto Group



Enduring Urbanism Actions

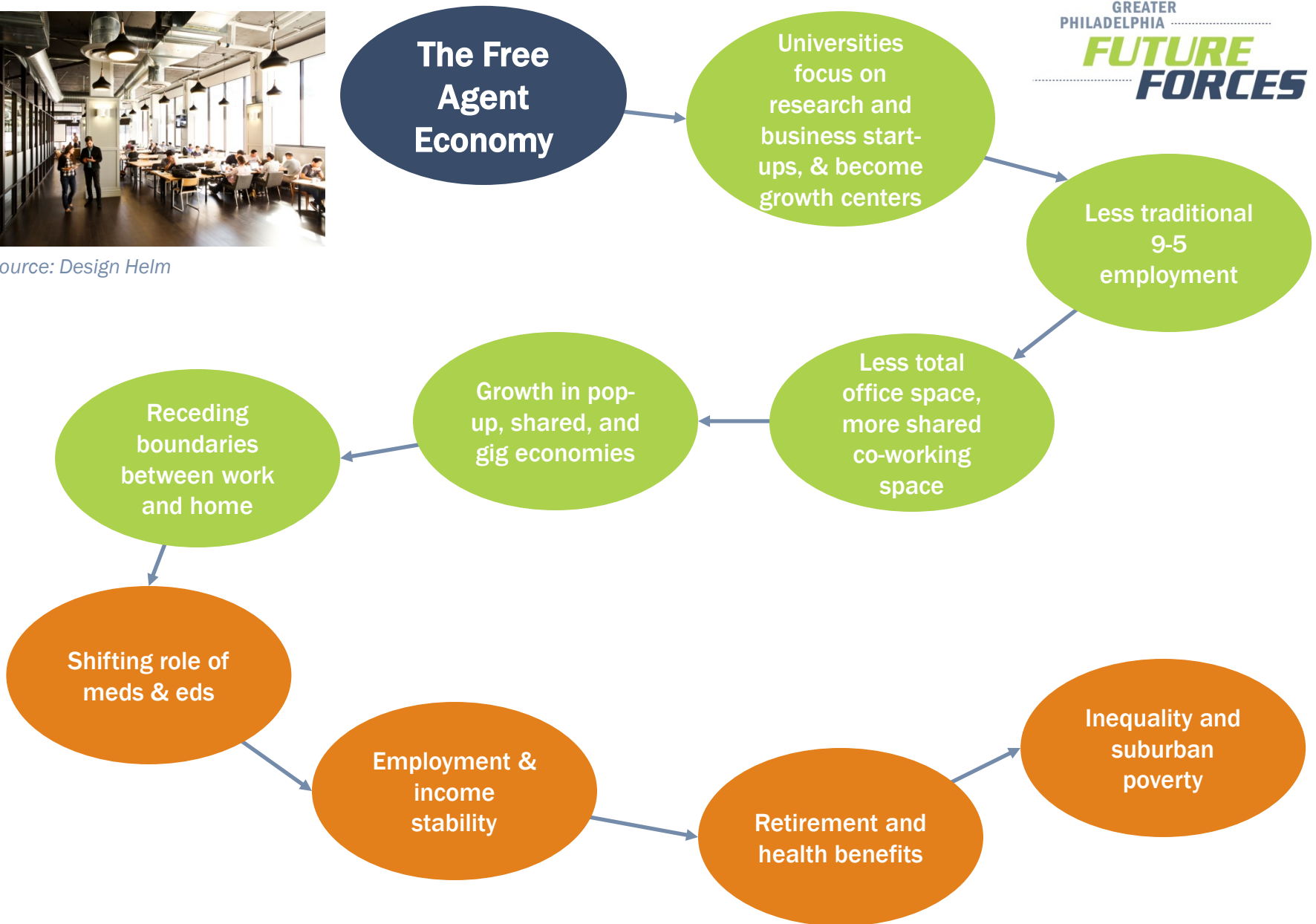
- ❑ (Re)Develop without displacement
- ❑ Complete Streets / protected bike lanes / pedestrian plazas
- ❑ Increase transit service
- ❑ Redevelop suburban office parks as mixed-use centers
- ❑ Protect industrial zones



Source: BLT Architects



Source: Design Helm

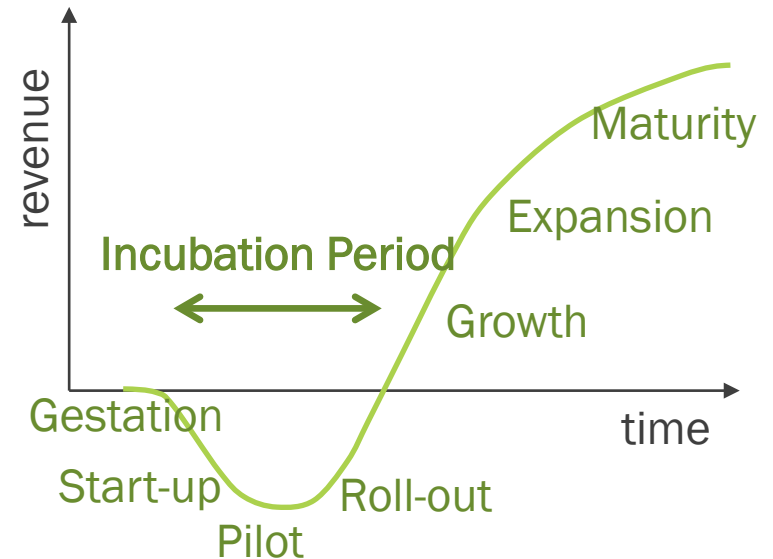


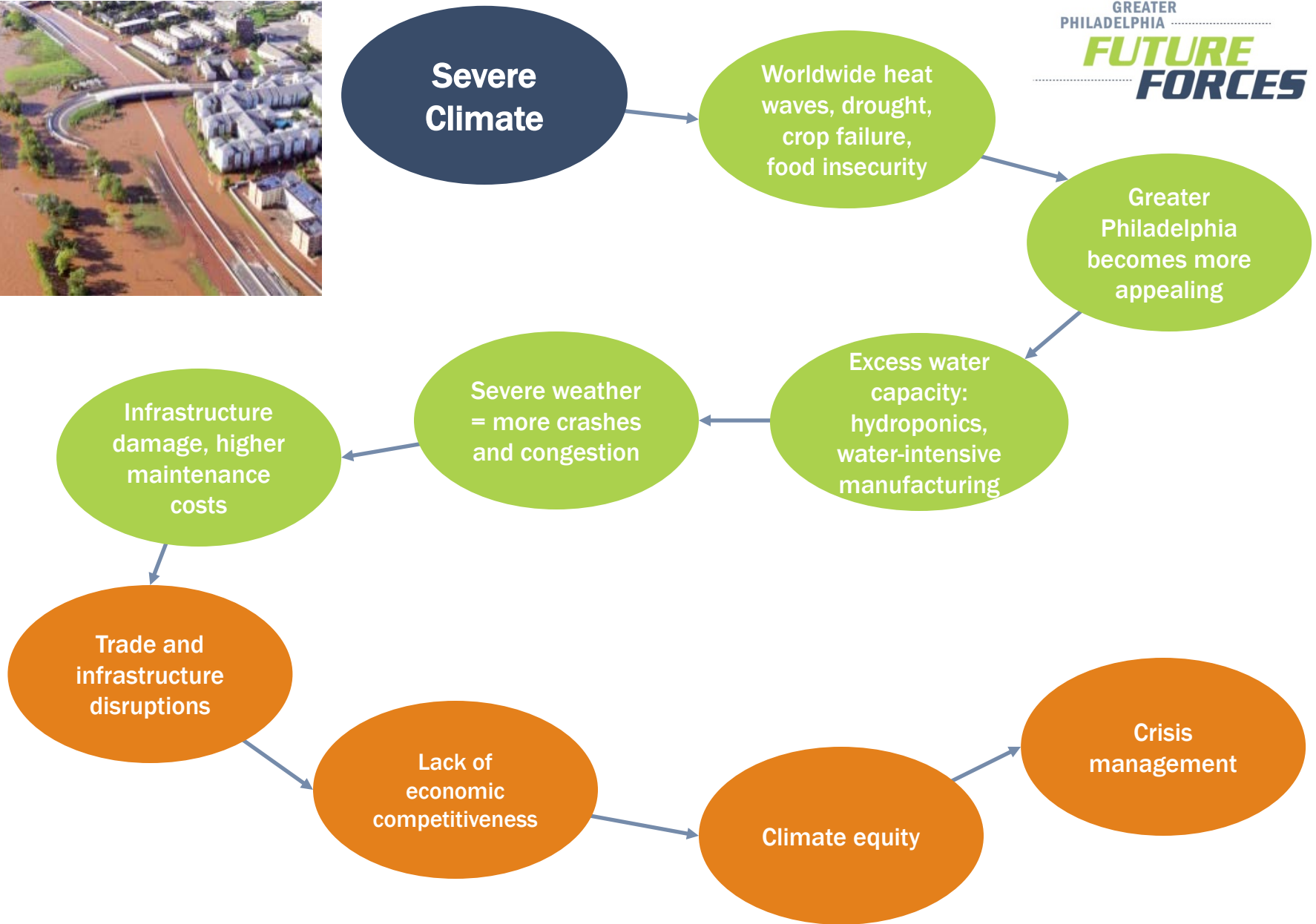
Free Agent Economy Actions



Source: PennConnects

- **Expand office space**
- **More transit service (office parks)**
- **Update zoning for shared / co-working office space**
- **Build more middle-class housing, especially in urban areas**
- **Permit the pop-up economy**





Severe Climate Actions

- ❑ Increase intergovernmental coordination
- ❑ More funding for infrastructure resiliency projects
- ❑ Improve emergency preparedness
- ❑ Preserve ag lands and promote regional food production
- ❑ Invest in alternative energy & accelerate phase-out of coal and petro power plants



Source: SEPTA



Source: RideScout

Transportation on Demand

Robotics and AI generate economic growth

New modes fully emerge, more carless households

Better real-time info = Better transportation decisions

Mix of suburban and center-based development patterns

AVs are shared taxis & toys for the wealthy

Longer lifespans thanks to medical technologies

Freight: closer procurement, efficient routing, autonomous shipping containers

Growing complexity

Disjointed transportation network

Transportation equity

Congestion and safety

Centers on demand

Trans. on Demand Actions

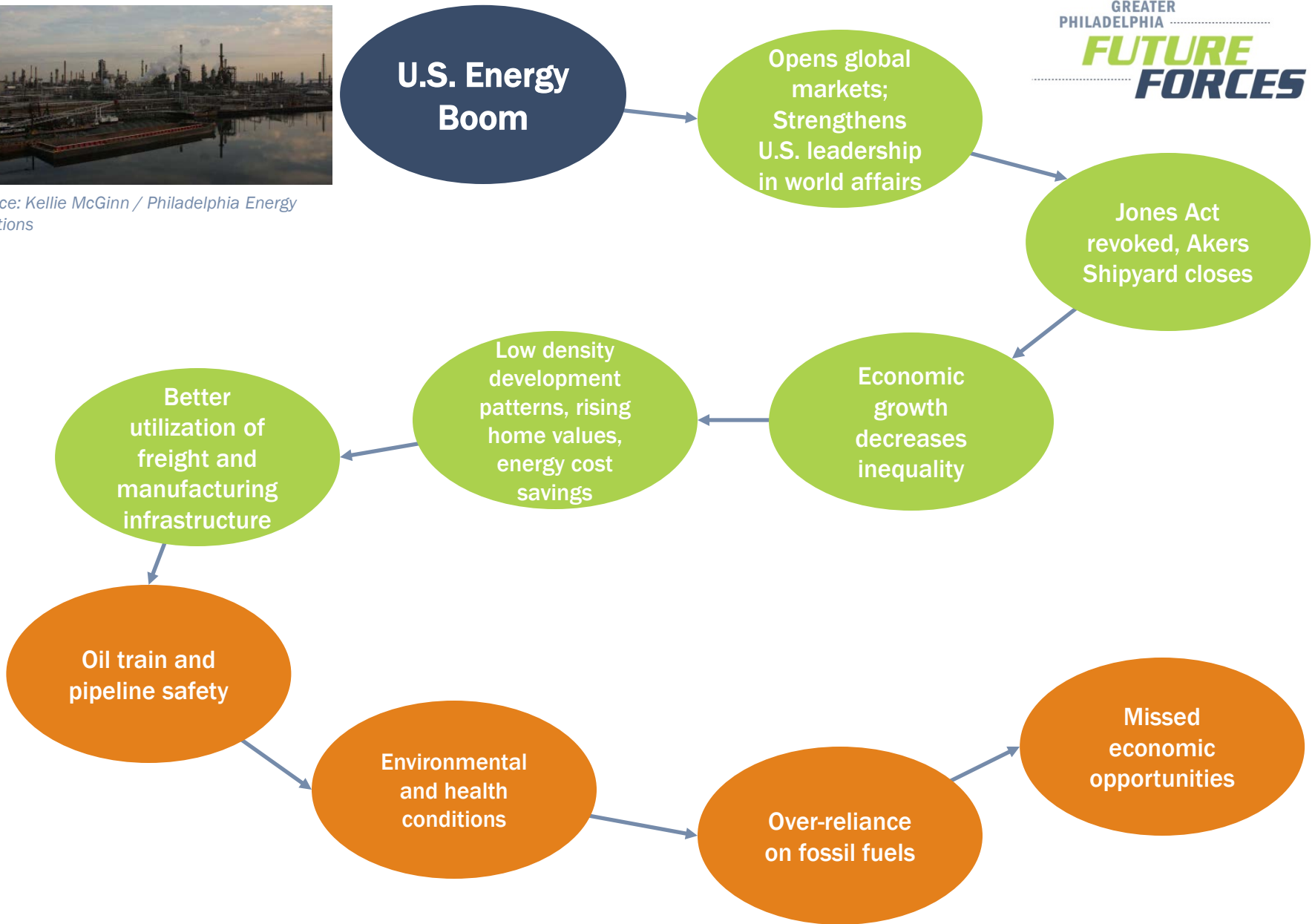
- ❑ Promote coordination between public and private transportation service providers
- ❑ Invest in new multimodal hubs, real-time info, and universal payment cards
- ❑ Evacuation plans for carless households
- ❑ Incentivize P3s to speed up project delivery and incorporate latest technology
- ❑ Legalize ride sourcing
- ❑ Income-based subsidies for work access



Source: www.carsharing.de



Source: Kellie McGinn / Philadelphia Energy Solutions



U.S. Energy Boom Actions

- Market the region as an energy hub**
- Improve oil train safety**
- Continue to invest in alternative energy**
- Improve transit and/or last mile service to jobs along Delaware River waterfront**
- Consider alternative structures for publicly owned utilities**
- Accelerate shift away from coal, petroleum, and waste-to-energy power plants; use natural gas as an intermediate replacement for nuclear power**
- Convert municipal and goods movement vehicles to run on natural gas**



Source: Jukka Isokoski via Wikimedia Commons

What We Are Looking For

- What are the likely outcomes of these forces?
- What should change in the contingent actions and skills for each force?
- What should change in the universal actions and skills?
- What are your key takeaways and other conclusions?

Next Steps

- Shorter, more publicly accessible brochure**
- Add Leading Indicators**
- Present to DVRPC Board, ~January 2016**
- Incorporate into Choices & Voices version 3.0**